



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/541,551

07/06/2005

Taiko Motoi

03500.017841

8232

5514 7590 11/02/2007
FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

LOGIE, MICHAEL J

ART UNIT

PAPER NUMBER

2881

MAIL DATE

DELIVERY MODE

11/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/541,551	Applicant(s) MOTOI, TAIKO	
	Examiner Michael J. Logie	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-21 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

REMARKS

An "Amendment" was received on August 16, 2007, in response to Office Action of May 16, 2007. Claims 1-15 have been cancelled and claims 16-22 have been entered as "new."

Applicant's remarks to prior office action are now moot due to the following rejection.

Claim Objections

Claim 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomimatsu et al. (US patent no. 6,538,254) and further in view of Toda (US patent no. 5,047,637).

In regards to claim 16, Tomimatsu et al. teach a sample processing apparatus (fig. 19) comprising: a probe (fig. 19, 11); probe moving means for moving the probe

Art Unit: 2881

such that the probe is brought into contact with a part of a sample (col. 25, lines 26-38); adhering means for adhering the probe to the part of the sample (col. 24, lines 41-46); ion beam generation means for irradiating the sample with an ion beam (col. 24, lines 24-34) to separate the part of the sample from a remaining body of the sample (fig. 27, a-j).

Tomimatsu et al. differ from the claimed invention by not disclosing temperature controlling means for controlling temperatures of the probe and the sample individually to prevent a temperature change of the part of the sample.

Toda et al. teach temperature controlling means (fig. 5) for controlling temperatures of the probe and the sample individually to prevent a temperature change of the part of the sample (col. 6, lines 23-30).

Since Toda and Tomimatsu et al. both teach sample processing and it is known that when the probe is brought into contact with the part of the sample and when the sample is irradiated with an ion beam by the ion beam generation means, the temperature change negatively affects the resolution of the sample processing (inherent in the apparatus of figure 19 in Tomimatsu), it would be obvious to one of ordinary skill in the art to have the temperature controlling means of Toda et al. in the device of Tomimatsu et al. because preventing temperature variation yields higher resolution (Toda et al. col. 2, lines 58-64).

In regards to claim 17, Tomimatsu et al. teach further comprising detection means for detecting a signal emitted from the sample in response to irradiation with an ion beam generated by the ion beam generation means (col. 24, lines 46-53).

In regards to claim 18, Tomimatsu et al. teach a sample processing apparatus according to claim 17, wherein the ion beam generation means generates a focused ion beam for processing the sample to almost separate the part of the sample from the remaining body of the sample before the probe is brought into contact with the part of the sample and completely separate the part of the sample after the probe is adhered to the sample (fig. 27, a-f).

In regards to claim 19, Tomimatsu et al. differ from the claimed invention by not disclosing a sample processing apparatus according to claim 16, wherein the temperature of the sample is regulated at a temperature where water present in the sample is solidified.

Toda teaches a sample processing apparatus according to claim 16, wherein the temperature of the sample is regulated at a temperature where water present in the sample is solidified (col. 3, lines 41-45, since the Peltier element can produce a temperature of 0 degrees Celsius it is inherent that the water present in the sample is solidified note: fig. 4, 37').

Since Toda and Tomimatsu et al. both teach sample processing and it is known that when the probe is brought into contact with the part of the sample and when the sample is irradiated with an ion beam by the ion beam generation means, the temperature change negatively affects the resolution of the sample processing (inherent in the apparatus of figure 19 in Tomimatsu), it would be obvious to one of ordinary skill in the art to have the temperature controlling means of Toda et al. in the device of

Tomimatsu et al. because preventing temperature variation yields higher resolution (Toda et al. col. 2, lines 58-64).

In regards to claim 20, Tomimatsu et al. further teach wherein the ion beam generation means, the detection means and the probe are provided in a chamber with a controllable atmosphere (col. 10, 15-20).

In regards to claim 21, Tomimatsu et al. further teach wherein the emitted signal is a secondary electron or a secondary ion (col. 24, lines 46-50).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2881

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Logie whose telephone number is 571-270-1616. The examiner can normally be reached on 7:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


ROBERT KIM
SUPERVISORY PATENT EXAMINER

ml

Michael Logie
10/17/2007